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ACTIVITIES OF THE USSR ALL-UNION SOCIETY OF PATHOPHYSIOLOGISTS

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The plenary session of the Administrative Board of the All-Union Society of Pathophysiologists took place recently at Moscow. The practice of conducting plenary sessions during the winter vacations has proved advantageous to the work of this society. At these sessions, the heads of the chairs of pathophysiology of medical institutes exchange information on work done during the past year. They also discuss methods of instructions and report on scientific research done at the institutes. In the work of the plenary session which was held this year, more than 150 pathophysiologists from Moscow, Leningrad, Kiev, Khar'kov, Tashkent, Kuybyshev, Sverdlovsk, Odessa and other cities took part.

The historical decisions of the 19th Party Congress, which determined that the prophylactic trend will be the leading guideline of Soviet medicine, have been reflected extensively in the scientific research done by pathophysiologists. Among reports presented at the plenary session, a great number was devoted to the problem of the investigation of neural regulation of organic functions as a physiological means of defense of the organism against various pathogenic effects of the environment, in the light of Pavlov's physiological teachings. In many reports, problems of infection and immunity were discussed. In other reports, information was given on experimental reproduction of various diseases on animal models, on the investigation of the mechanism of the action of various health-resort factors, etc.

A number of communications dealt with the role of the cortex and subcortex in processes of adaptation and of compensation of disturbed functions (V. S. Galkin, N. N. Zayko), experimental therapy (N. N. Sirotnin, M. P. Derevyagin), and problems of nerve regulation in immunogenesis (A. N. Gordiyenko, G. V. Peshkovskiy, M. I. Undritsev). The reports were widely discussed and supplemented by participants at the meeting. The discussions have shown that the organization of the work of pathophysiologists, on the basis of the decisions of the joint session of the Academy of Sciences USSR and the Academy of Medical Sciences USSR, proceeds successfully. They have also shown that Pavlov's physiological teachings have become a firm basis for the development of Soviet pathological physiology. At the same time, it has been brought out that the simplified and vulgarized application of some postulates of contemporary medicine has led, at present, to the need for various corrections and further precision.

In his report entitled "The Role of Higher Divisions of the Central Nervous System in Processes of Adaptation, Protection, and Compensation," V. S. Galkin and the participants who discussed this report subjected to criticism the simplified and vulgarized concept of anesthesia [literally, narcosis] as a universal therapeutic method, which exerts only beneficial action on the organism under various pathological conditions. In the opinion of the majority of the participants in the discussion, anesthesia is definitely harmful at times when it is necessary to reinforce regeneration processes and other protective mechanisms.

Interesting data were presented by N. N. Zayko of Odessa in his report entitled "Dystrophy Processes in Traumatic Injuries of Sensory Nerves and Compensation Phenomena in These Processes." N. N. Zayko expressed the assumption that the absence of innervation in the lens and the impossibility of positive trophic reflexes, which is due to this absence of innervation, explains the greater susceptibility of the lens to injuries, as compared with the cornea. For that reason, Zayko stated, traumatic cataracts develop after eye injuries.

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N. N. Sirotinin (Kiev), corresponding member of the Academy of Sciences Ukrainian SSR, discussed the utilization of a high mountain climate as a factor which affects processes of the interaction of the cortex with the subcortex in schizophrenia. The work in question is on an experimental therapeutic basis at this stage. According to Sirotinin, many methods used for the treatment of schizophrenia (insulin shock, electrical-spasm therapy) have one thing in common: they produce oxygen starvation of the brain. Oxygen starvation is also produced by the effects of a stay at a high elevation. The extreme sensitivity of the cerebral cortex to oxygen starvation is the basis of the therapeutic effect in the treatment of schizophrenia. As the result of this treatment, relaxation of the inhibition takes place, so that catatonics become lively, talkative, and capable of doing work. Sirotinin expressed the supposition that it would be possible to prevent schizophrenia by exposing the patients to the effects of a high mountain climate.

M. P. Deravyagin of Kursk presented data on the action of sodium bromide, luminal, caffeine, and electrical irritation of the brain on processes of the healing of skin wounds and of bone injuries. Deravyagin indicated that sodium bromide exerts a favorable effect on the healing of bone injuries.

G. V. Peshkovskiy of Molotov presented diverse data obtained in research on the pathogenesis of processes of infection. This research was carried out from the standpoint of nervism. Under the direction of Peshkovskiy, processes of the formation of tetanus antitoxins in rabbits were investigated with relation to the place of the introduction of the antigen. It was established that the quantity of antitoxins formed when the tetanus anatoxin is introduced into a denervated joint is 1 1/2-2 times higher than in cases when the immunogenic agent is introduced into a joint with preserved denervation. Peshkovskiy presumed that under conditions of normal denervation, impulses arise in the region of the joint, and that these impulses exhibit the formation of antibodies. Inverse relationships were observed in the investigation of the formation of agglutinins after rabbits had been immunized with Flexner dysentery vaccine.

A. N. Gordiyenko of Rostov-on-Don presented new data in support of the hypothesis advanced by him to the effect that antibodies are formed as a result of a reflex action rather than by direct action of the antigen on the so-called effectors, i.e., elements of Mechnikov's microphage system. Gordiyenko asserted that after the carotid sinus has been isolated from the blood stream, one can obtain a reflex development of antibodies in it within 5 minutes without resorption of the antigen from the sinus tissue into the animal's blood. Gordiyenko's report led to a lively discussion, during which a number of statements were made criticizing his theory extensively.

The plenary session resolved that it is necessary to verify Gordiyenko's data from every standpoint because of the importance of these data for the understanding of the mechanism of the development of antibodies.

Methods of teaching pathological physiology were also discussed at the meeting. In the course of this discussion, the subject matter of practical training courses was taken up. Two chapters from a textbook on pathological physiology, which is in preparation, were read. The chapter on the theory of disease was read by S. N. Pavlenko and the chapter on reactivity, by A. D. Ado.

The plenary meeting confirmed the account made by the Administrative Board of the All-Union Society of Pathophysiologists and passed a resolution on the organization of the second All-Union Conference of Pathophysiologists in 1955. The plenary meeting recognized as desirable the publication of a special journal of pathophysiology.

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